

JAMIE GLEDHILL

The Talking Trees of Chalkwell Park

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Output Reference: NUA-JG-01

Output Date: 2015

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1. SUPPORTING STATEMENT

Output title	The Talking Trees of Chalkwell Park
Output type	M-Exhibition
Output date	2015

Jamie Gledhill was commissioned by Metal Culture Southend to develop a creative response to the world's first digital art park, the NetPark, a public green space with open wi-fi, in Southend, Essex. The project was funded by the Digital R&D Fund for the Arts, ACE in partnership with NESTA and AHRC.

The principal fields of research were interaction design with a focus on technical research into Augmented Reality (AR) solutions to develop the AR app. Gledhill used the Metaio AR platform and spent significant time investigating tracking options through practical experimentation. Initially he tested image-based tracking to identify a portion of a given tree trunk. Gledhill then experimented with marker-based tracking using the NetPark graphic. Neither of these solutions were satisfactory.

Gledhill's research led him to use an instant tracking technique where a user takes a picture of an object with their device and this then becomes a temporary tracking marker. This was achieved through customisations Gledhill created to the Metaio platform using PHP, JavaScript, HTML5 and CSS. His work was innovative in 2015 because it combined elements of an AR app with mobile-optimised web-based content, what is now referred to as a 'web app'. This 'marker-less' tracking, resolved as mobile-friendly videos, had not been achieved before that point. It was popularised the following year by 'Pokemon Go' which employed a much simpler form than that developed by Gledhill for this project.

Gledhill also conducted significant archival research into historical and contemporary events related to Chalkwell Park, including a call for participation, which became the 'Park Stories' that informed script writing for the series of tree characters central to the work.

The location specific digital artwork combined social history and a sense of place into an Augmented Reality (AR) experience, exhibited in Chalkwell Park, Southend from June to December 2015.



Fig.1 Still from In App footage

2. RESEARCH PROCESS

Research focused on two areas: interaction design for the Augmented Reality (AR) experience and social history research for the ‘tree stories’.

Gledhill customised the Metaio platform using PHP, JavaScript, HTML5 and CSS and experimented with different tracking options so that the AR would work with trees in the park. Initially he aimed to use image-based tracking to identify a portion of a given tree trunk. However, it became apparent that image-based tracking cannot accommodate a cropped image, i.e. the image to be tracked must be contiguous or be visibly differentiated from a contiguous background. Image-based tracking of the entire tree was impractical due to the complex nature of the tree shape and seasonal variation of appearance. Gledhill decided to locate isolated features within the surface of the tree unique to individual trees, such as stumps. Image-based tracking proved capable of recognising a given stump as long as the tracking was conducted from a similar position and angle as the original photograph. However, with differing lighting conditions, all of the original matches failed.

Gledhill then experimented with marker-based tracking using the NetPark graphic with minor variations, attempting to track a unique AR experience with a 1:1 relationship with a given marker variant. Again, initial tests went well but ran into glitches that couldn’t be resolved. It became clear that the AR functionality could not reliably distinguish between variants of the NetPark graphic. The recognition algorithm looked for a best match and often accepted a non-matching variant as a successful match. Increasing the match reliability threshold resulted in less incidence of any match being made despite pointing the AR enabled device directly at the marker

Gledhill tried variations of graphic colour, tone and border and was able to improve reliability but not enough to be confident of a seamless visitor experience. His research led him to use an instant tracking technique where a user takes a picture of an object with their device and this becomes a temporary

tracking marker. Reliability was high unless an image is taken of a featureless surface. Within the context of the AR experience, visitors would be guided to a given tree, shown an image of an overt feature and asked to ‘scan’ it. The tracking match was made and the AR content shown on the tree as originally envisaged.

Gledhill also conducted archival research into historical and contemporary events that took place in Chalkwell Park, a call for participation invited people to send in stories or memories, Gledhill interviewed the park keepers, Metal staff and associates, researched local newspapers and websites. This research resulted in the ‘Park Stories’ that informed script writing for the eight tree characters: Man impaled on Park railings; Phone stolen in Park; Red-faced boy stuck up a tree; Pavilion set on fire as cricketers are inside; Southend’s Second Zeppelin visit.

The research process for the Talking Trees project built on practices developed in an earlier public art commission ‘Journey Words’, a dual-screen interactive text installation, product of a 6 month public arts commission awarded by ECC Place Services and ENAS (exhibited Harwich, April 2015), although this used different technology.



Fig.2 An early face render

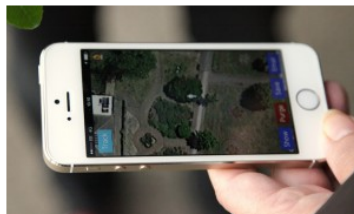


Fig.3 Final face render - Janine



CALL FOR PARTICIPATION – MEMORIES OF CHALKWELL PARK

[Home](#) / [Blog](#) / Call for participation - memories of Chalkwell Park



Artist [Jamie Gledhill](#) is developing a digital project for the launch of [NetPark](#) in September.

He is looking for interesting, unusual or even outlandish stories of events that have happened in Chalkwell Park over the last 100 years. The stranger the better. He wants to develop these stories into short spoken word pieces that will be featured in one of the forthcoming NetPark art works. If you have any ideas at all they would be very welcome. Stories you personally know and are willing to contribute or perhaps stories you know of and can point Jamie in the right direction to find out more about. You can jot something down on paper and return it to [Metal in Southend](#) for Jamie Gledhill's attention or email him directly: jamie@digitalsurface.org.

Fig.4 Call for participation on a South Essex network for Culture and Events

SOUTHEND'S SECOND ZEPPELIN VISIT: A WOMAN KILLED LITTLE DAMAGE TO PR
The Manchester Guardian (1905-1906), May 28, 1915.
ProQuest Historical Newspapers: The Guardian (1857-2003) and The Observer (1791-2003)
pg. 6

SOUTHEND'S SECOND ZEPPELIN VISIT.

A WOMAN KILLED.

LITTLE DAMAGE TO PROPERTY

Shortly before noon yesterday the Secretary of the Admiralty issued the following announcement:—

“Late last night a Zeppelin visited the east coast of England.

Bombs were dropped on Southend. The casualties reported up to date are two women killed, and one child badly injured.

Very little material damage was done. Aeroplanes and seaplanes preceded in chase, but the Zeppelin succeeded in escaping in an easterly direction.

The report issued by the German Headquarters yesterday says:—

“An air attack was successfully carried out on the fortifications of Southend, on the lower Thames.

SOUTHEND'S SECOND RAID

(FROM OUR SPECIAL CORRESPONDENT.)

SOUTHEND, THURSDAY.

This morning (writes a London representative of the “Manchester Guardian”) I found Southend busy talking over its second air raid of the night before with even more than the usual disagreements as to what really happened. The want of definiteness on important points was extraordinary, for this raid was made at eleven o'clock, when the streets were still fairly well populated, and the raiders were clearly visible in a clear moonlit sky. The visit was made quite an hour earlier than any previous raid, and nearly four hours earlier than the Southend raid 20 days ago.

Half the town seems to have watched from doorsteps the leisurely course of the Germans, yet no two witnesses I have seen agree as to the number of airships in the sky. The bulk of opinion is that there were two, but some people are positive they saw three. At any rate, everyone is certain that there were more than one.

Southend Takes the Raid Very Calmly

The effects of the second raid were slightly less serious, but curiously similar to those of the first. Only fifty bombs were dropped this time, instead of a hundred, and last night they were all incendiary bombs. A fortnight ago the worst damage was done by explosive bombs. The damage to property was worse last time, but the second visit, in killing a woman and injuring two other persons very badly, has caused rather more hurt to life.

A postman living near the station told me what he saw. From his front garden the Zeppelin was easily discernible, very high in the sky. “It looked like a cucumber,” he said. “There were streaky clouds in the sky, and when it got against a cloud and the moonlight fell on it, I could see the silvery glint of its aluminium casing. It seemed to be slowly going round in circles. Then I thought I could be sure that the Zeppelin hung stationary for a few minutes, as if making up its mind what direction to take. It slowly turned and made away eastwards out of sight.”

All the accounts put the height of the airship at over 6,000 feet—a member of the Flying Corps who was out put it at 10,000,—but an accurate figure is impossible. This Zeppelin did very little damage.

The other Zeppelin—assuming that the inference from the timing of the bombs is correct—did more, because it dropped a bomb which fell plumb upon a woman (Miss May Faira, a London visitor), who was getting off the tram-car at Chalkwell Park, a place about half-way between Southend and Leigh. She was killed instantly.

Fig.5 Sample story from report in The Manchester Guardian 28 May 1915

Story	Description	Character	Gender	Voice Actor
Tree Climber		Forgetful old git - grumpy old man	M	Darren
Salamander	I wouldn't like one of them things crawling over my roots.	Fearful	F	?Nicola/Amanda/Jo
Zoo / Monkeys on crates / bear / peacocks	Poor little things, it's terrible how they treated <u>em</u> kept <u>em</u> in cages, they was sea sick for days	Empathic / self-deprecating	F	Amanda
Bombs All used to be fields	Come to chop me down have you? You <u>ain't gonna</u> chop me down. You'll be dead and gone before they chop me down. I <u>ain't</u> going nowhere.	<u>Agressive</u> / rude	M	Robin?
Ghosts		Sarcastic	M	Alex
Cricket	in progress	posh, irrelevant, spouting	M	Darren
Horticulture / state of the park	Rose Garden, overgrown	<u>positivist</u> / moralistic	F	Nicola Goodchild
Fun/ <u>crazyness</u> in the park/Art?		anarchic / laissez faire	F	Jo <u>Overfield</u>

Fig.6 Plan for Talking Tree characters and stories

3. RESEARCH INSIGHTS

The project aim was to develop a creative digital response to the world's first 'net park', a public green space with open wi-fi. The outcome was a location-specific Augmented Reality app that involved finding particular trees around the park which would then tell a story of historical/sociological significance.

The research insights developed Gledhill's practice as an artist and interactive designer who creates work intended to be public, participatory and playful. The work combined elements of an app with mobile-optimised web-based content, what is now referred to as a web app, which was innovative in 2015. This was made available through the Metal website and also directly to groups of visitors. The innovation of marker-less tracking combined with narratives developed from social history research, resolved as mobile-friendly videos placed by Augmented Reality (AR), had not been achieved before that point. Marker-less tracking was little known until popularised the following year by 'Pokémon Go' which employed a much simpler form than that developed by Gledhill for this project.

The research insights developed in the Talking Trees project also contributed towards an AR app developed by Collusion in 2017 'The Brink of the Future', in Wisbech, Cambridgeshire. <http://www.collusion.org.uk/projects/the-brink-of-the-future/> (accessed 15 March 2021)

In App footage: <https://vimeo.com/524198246/20a79cb699>

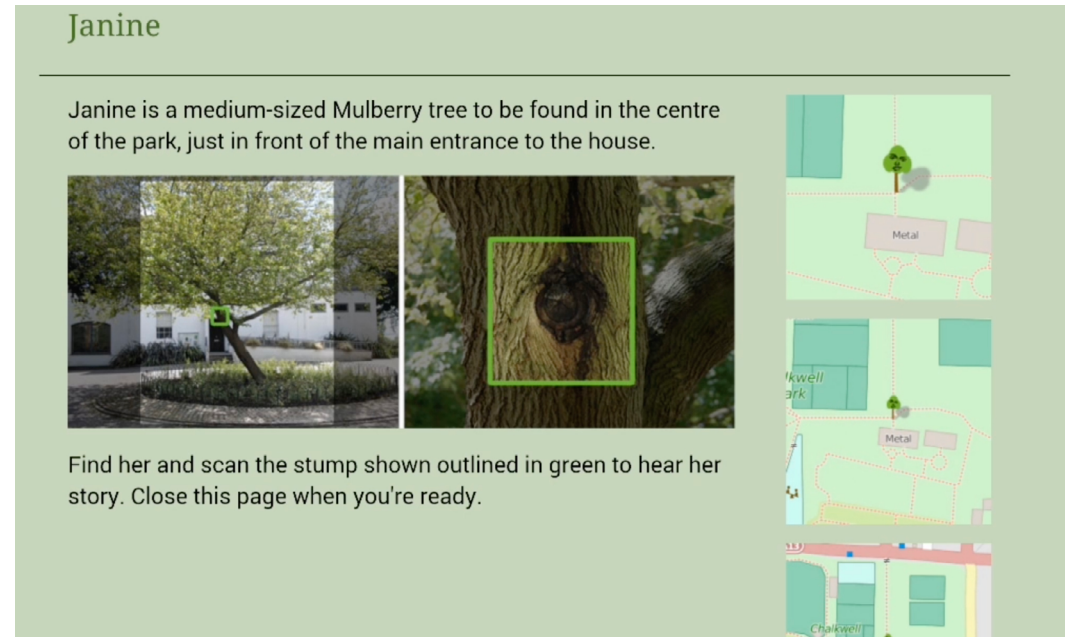


Fig.7 Janine image from NetPark website

4. DISSEMINATION



Fig.8 Website trailer ([embedded mp4 file](#))

The outcome was a location-specific Augmented Reality app that involved locating particular trees around Chalkwell Park, Southend on Sea, which would then tell their stories. The outcome was disseminated on eight trees from June to December 2015.

The project received substantial national recognition and led to a further series of public art technology commissions for Jamie Gledhill including the Reframe residency at Harlow Gibber Gallery, November 2015 and Portals for Mortals in Nene Park, Peterborough, for Peterborough Presents in August 2016. Chalkwell Park hosted the Village Green Arts and Music Festival in July 2015 and the Southend Carnival Fun Fair in August 2015, both events attracted substantial numbers of visitors.

The work was planned to operate in Chalkwell Park for at least a year. However, Metaio was bought out by the Apple Corporation in May 2015 and the platform was withdrawn by the company early in 2016 which is why the Talking Trees app stopped working at that time.

<http://www.metalculture.com/metal-tv/netpark-jamie-gledhills-talking-trees/>
(accessed 15 March 2021)

Vice Magazine review

https://www.vice.com/en_au/article/xy45z7/trees-come-alive-at-the-worlds-first-permanent-digital-art-park (accessed 15 March 2021)

Design Week review

https://www.designweek.co.uk/worlds-first-digital-art-park-launches-in-southend-on-sea/?cmpid=dwnews_1627679&utm_medium=email&utm_source=newsletter&utm_campaign=dw_daily (accessed 15 March 2021)

The Guardian review

<https://www.theguardian.com/artanddesign/2015/nov/13/netpark-invisible-art-gallery-digital> (accessed 15 March 2021)

Observer Technology pull-out

<https://www.theguardian.com/technology/2015/jun/16/digital-park-netpark-southend> (accessed 15 March 2021)

Follow-on Work

Harlow commission

<http://jamiegledhill.tv/gibberd-virtual-residency-360-videos/> (accessed 15 March 2021)

Peterborough Presents commission

<http://jamiegledhill.tv/work/portals-for-mortals/> (accessed 15 March 2021)



Fig.9 Southen Echo 17 June 2015



Fig.10 Launch event of *The Talking Trees of Chalkwell Park*



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